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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,571	01/26/2001	Ahmad Tawil	016295.0635	7613
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			EXAMINER	
			LEE, PHILIP C	
			ART UNIT	PAPER NUMBER
			2452	
			MAIL DATE	DELIVERY MODE
			01/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/770,571

Applicant(s)

TAWIL ET AL.

Examiner

PHILIP C. LEE

Art Unit

2452

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13, 15-20, 22 and 29-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 15-20, 22 and 29-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

1. This action is responsive to the amendment and remarks filed on October 16, 2008.
2. Claims 1-5, 7-13, 15-20, 22 and 29-33 are presented for examination and claims 6, 14, 21, 23-28 and 34 are cancelled.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 103

4. Claims 1-3, 5, 7-8, 29-31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunlock, U.S. Patent 6,606,630 (hereinafter Gunlock) in view of Blumenau et al, U.S. Patent 6,931,440 (hereinafter Blumenau), and further in view of Blumenau et al, U.S. Patent 6,839,747 (hereinafter Blumenau, 6,839,747).
5. Gunlock and Blumenau were cited in the previous office action.
6. As per claim 1, Gunlock taught the invention substantially as claimed comprising:
a high speed network interconnect (col. 6, lines 17-26; fig. 1) ;
multiple target devices coupled to the high speed network interconnect, wherein each target device has a unique hardware address (fig. 1; col. 6, lines 17-26; col. 8, lines 13-25);

multiple host devices, wherein each host device comprises a host bus adapter operable to perform a port login with a target device (col. 4, lines 58-63; col. 6, lines 32-48; col. 8, lines 25-27); and

a unique hardware address table stored in a memory location accessible by each host bus adapter (col. 6, lines 40-43), wherein the unique hardware address table stores the unique hardware address of every target device that each respective host is to access (col. 9, lines 54-62; col. 8, lines 13-27, 38-47).

7. Gunlock did not teach not attempting to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table. Blumenau taught a similar system wherein a centralized unique hardware address table separate from each host bus adapter (col. 16, lines 3-14) and wherein a unique hardware address of a target device must be present in a unique hardware address table to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the

reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

9. Gunlock and Blumenau did not teach the unique hardware address table stores the unique hardware address of authorized target devices. Blumenau (6,839,747) taught a centralized unique hardware address table (col. 5, lines 37-43; col. 8, lines 14-16), wherein the unique hardware address table stores the unique hardware address of every target device that each respective host is authorized to access (col. 9, lines 17-19, 45-62).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau (6,839,747) because Blumenau's (6,839,747) teaching of storing the unique hardware address of every target device that each respective host is authorized to access would increase the security of Gunlock's and Blumenau's systems by preventing a host device from accessing target device without authorization.

11. As per claim 2, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

12. As per claim 3, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claims 1 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

13. As per claim 5, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein at least one target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

14. As per claims 7 and 8, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 1 above. Gunlock further taught wherein the high speed network interconnect is a high speed optical network interconnect (col. 6, lines 17-21).

15. As per claim 29, Gunlock taught the invention substantially as claimed comprising:
a memory (col. 6, lines 40-43);
a unique hardware address table stored in a memory and accessible by the host bus adapter(col. 6, lines 40-43), operable to contain one or more unique hardware address corresponding to one or more target device with which the host bus adapter is to access(col. 9, lines 54-62; col. 8, lines 13-27).

16. Gunlock did not specifically teach attempting to perform a port login. Blumenau taught a similar system wherein a centralized unique hardware address table separate from each host bus adapter (col. 16, lines 3-14) and wherein a unique hardware address of a target device must be

present to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

17. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

18. Gunlock and Blumenau did not teach the unique hardware address table stores the unique hardware address of authorized target devices. Blumenau (6,839,747) taught a centralized unique hardware address access table (col. 5, lines 37-43; col. 8, lines 14-16), operable to contain one or more unique hardware addresses corresponding to one or more target devices with which the host bus adapter is authorized to access (col. 9, lines 17-19, 45-62).

19. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau (6,839,747) because Blumenau's (6,839,747) teaching of storing unique hardware address corresponding to one or more target devices with which the host bus adapter is authorized to access would increase the

security of Gunlock's and Blumenau's systems by preventing a host device from accessing target device without authorization.

20. As per claim 30, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 29 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

21. As per claim 31, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 29 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

22. As per claim 33, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claim 29 above. Gunlock further taught wherein the target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

23. Claims 16-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunlock, Blumenau (6,931,440) and Blumenau et al, U.S. Patent 6,665,714 (hereinafter Blumenau et al, 6,665,714) in view of Blumenau (6,839,747).

24. Blumenau et al, U.S. Patent 6,665,714 was cited in the last office action.

25. As per claim 16, Gunlock taught the invention substantially as claimed for managing a port login performed by a host bus adapter for a host that is communicatively coupled to a fabric, wherein one or more target devices, each having a unique hardware address, are coupled to the fabric (fig. 1, lines 17-26; col. 8, lines 13-25); comprising the steps of:

storing the unique hardware address of selected target devices to a unique hardware address access table (col. 9, lines 37-40, 54-62).

26. Gunlock did not teach not attempting to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table. Blumenau taught a similar system comprising the step of: storing the unique hardware address of selected target device to a centralized unique hardware address access table (col. 16, lines 3-28) wherein a unique hardware address of a target device must be present in a unique hardware address table to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.).

27. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

28. Gunlock and Blumenau did not teach querying for available target devices. Blumenau et al (6,665,714) taught from the host bus adapter, querying the fabric for available target devices; receiving at the host bus adapter an identification of available target devices (col. 6, lines 62-col. 7, line 12; col. 8, lines 35-36; col. 21, lines 67-col. 22, lines 14); and selecting target devices that may be accessed by the host from the identification of available target devices (col. 22, lines 14-20).

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau et al (6,665,714) because Blumenau et al's (6,665,714) method of querying the fabric for available target devices would increase the efficiency of Gunlock's and Blumenau's systems by avoiding login attempt to unavailable target devices by the host.

30. Gunlock, Blumenau and Blumenau et al (6,665,714) did not explicitly teach target devices which the host bus adapter is authorized to access. Blumenau (6,839,747) taught unique hardware address of every target device that each respective host is authorized to access (col. 9, lines 17-19, 45-62).

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) because Blumenau's (6,839,747) teaching of storing the unique hardware

address of every target device that each respective host is authorized to access would increase the security of Gunlock's, Blumenau's and Blumenau et al (6,665,714) systems by preventing a host device from accessing target device without authorization.

32. As per claim 17, Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) taught the invention substantially as claimed in claim 16 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

33. As per claim 18, Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) taught the invention substantially as claimed in claim 16 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

34. As per claim 19, Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) taught the invention substantially as claimed in claim 16 above. Blumenau et al (6,665,714) further taught wherein the unique hardware address is a World-Wide Name (col. 6, lines 65-67; col. 22, lines 4-11).

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) because Blumenau et al's (6,665,714) teaching of World-Wide Name would enhance their systems by providing a unique identification for identifying each storage device (col. 22, lines 7-11).

36. As per claim 20, Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) taught the invention substantially as claimed in claim 16 above. Gunlock further taught wherein the target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

37. As per claim 22, Gunlock, Blumenau, Blumenau et al (6,665,714) and Blumenau (6,839,747) taught the invention substantially as claimed in claim 16 above. Gunlock further taught wherein the high speed network interconnect is a high speed optical network interconnect (col. 6, lines 17-21).

38. Claims 4, 9-13, 15 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gunlock, Blumenau and Blumenau (6,839,747) in view of Blumenau et al, U.S. Patent 6,665,714 (hereinafter Blumenau et al, 6,665,714).

39. As per claims 4 and 32, Gunlock, Blumenau and Blumenau (6,839,747) taught the invention substantially as claimed in claims 1 and 29 above. Gunlock, Blumenau and Blumenau (6,839,747) did not explicitly teach the unique hardware address is a World-Wide Name. Blumenau et al, 6,665,714, taught wherein the unique hardware address is a World-Wide Name (col. 6, lines 65-67; col. 22, lines 4-11).

40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau, Blumenau (6,839,747) and

Blumenau et al (6,665,714) because Blumenau et al's (6,665,714) teaching of World-Wide Name would enhance Gunlock's, Blumenau's and Blumenau's (6,839,747) systems by providing a unique identification for identifying each storage device (col. 22, lines 7-11).

41. As per claim 9, Gunlock taught the invention substantially as claimed for managing the port login performed by a host bus adapter for a host that is communicatively coupled to a fabric, wherein one or more target devices, each having a unique hardware address, are coupled to the fabric (fig. 1, lines 17-26; col. 8, lines 13-25) comprising:

determining whether the unique hardware address of an available target device is present on a unique hardware address table stored in a memory location accessible by the host bus adapter, wherein the unique hardware address table contains the unique hardware addresses of each target device that the host is to access (col. 8, lines 13-27; col. 6, lines 37-42).

42. Gunlock did not teach performing a port login with target device whose unique hardware address is present. Blumenau taught a similar system wherein a centralized unique hardware address table separate from each host bus adapter (col. 16, lines 3-14), wherein the unique hardware address table stores unique hardware address of a target device must be present to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.), and performing a port login with each target device whose unique hardware address is present on the unique hardware address table (col. 16, lines 3-15).

43. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock and Blumenau because Blumenau's teaching of a unique hardware address must be present in order to perform port login would increase the reliability in Gunlock's system by allowing a component of the computer system (e.g., host bus adapter) to access to the correct target device (e.g., logical volume) (col. 12, lines 25-31).

44. Gunlock and Blumenau did not teach the unique hardware address table stores the unique hardware address of authorized target devices. Blumenau (6,839,747) taught a centralized unique hardware address access table (col. 5, lines 37-43; col. 8, lines 14-16), contains the unique hardware addresses of each target device that the host is authorized to access (col. 9, lines 17-19, 45-62).

45. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau and Blumenau (6,839,747) because Blumenau's (6,839,747) teaching of storing unique hardware address corresponding to one or more target devices with which the host bus adapter is authorized to access would increase the security of Gunlock's and Blumenau's systems by preventing a host device from accessing target device without authorization.

46. Gunlock, Blumenau and Blumenau (6,839,747) did not teach querying for available target devices. Blumenau et al, 6,665,714, taught from the host bus adapter, querying the fabric

for available target devices and receiving at the host bus adapter an identification of available target devices (col. 6, lines 62-col. 7, line 12; col. 8, lines 35-36; col. 21, lines 67-col. 22, lines 14).

47. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al, 6,665,714 because Blumenau et al's (6,665,714) method of querying the fabric for available target devices would increase the efficiency of Gunlock's, Blumenau's and Blumenau's (6,839,747) systems by avoiding login attempt to unavailable target devices by the host.

48. As per claim 10, Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) taught the invention substantially as claimed in claim 9 above. Gunlock further taught wherein the unique hardware address is a port name (col. 8, lines 21-25).

49. As per claim 11, Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) taught the invention substantially as claimed in claim 9 above. Gunlock further taught wherein the unique hardware address is a node name (col. 8, lines 21-25).

50. As per claim 12, Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) taught the invention substantially as claimed in claim 9 above. Blumenau et al

(6,665,714) further taught wherein the unique hardware address is a World-Wide Name (col. 6, lines 65-67; col. 22, lines 4-11).

51. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) because Blumenau et al's (6,665,714) teaching of World-Wide Name would enhance Gunlock's, Blumenau's and Blumenau's (6,839,747) systems by providing a unique identification for identifying each storage device (col. 22, lines 7-11).

52. As per claim 13, Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) taught the invention substantially as claimed in claim 9 above. Gunlock further taught wherein the target device is a storage device (col. 6, lines 17-24; col. 7, lines 19-20).

53. As per claim 15, Gunlock, Blumenau, Blumenau (6,839,747) and Blumenau et al (6,665,714) taught the invention substantially as claimed in claim 9 above. Gunlock further taught wherein the high speed network interconnect is a high speed optical network interconnect (col. 6, lines 17-21).

54. Applicant's arguments with respect to claims 1-5, 7-13, 15-20, 22 and 29-33, filed on 10/16/2008 have been considered but they are not persuasive.

55. In the remarks, applicant argued that:

- (1) The combination of Gunlock and Blumenau fails to teach that “the unique hardware address table stores the unique hardware address of every target device that each respective host is authorized to access”.
- (2) The cited prior arts fail to teach “that the host bus adapter for each respective host will not attempt to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table as a target device that the respective host is authorized to access.”

56. In response to point (1), Blumenau (6,839,747) teaches a configuration database including a table storing which ones of the HBAs that have access to which ones of the volumes (col. 9, lines 17-19). Blumenau (6,839,747) further teach the table (shown in fig. 4) contains records 76a-76n, wherein each of the records includes the WWN associated with the HBA, and a LUN map identifying which of the logical volumes the HBA may access (i.e., the unique hardware address table stores the unique hardware address of every target device that each respective host is authorized to access)(col. 9, lines 45-62).

57. In response to point (2), the combination of Blumenau (6,931,440) and Blumenau (6,839,747) teaches that the host bus adapter for each respective host will not attempt to perform a port login with a target device unless the unique hardware address of that target device is present on the unique hardware address table as a target device that the respective host is authorized to access. Specifically, Blumenau(6,931,440) teaches wherein a unique hardware

address of a target device must be present in a unique hardware address table to perform a port login with the target device (col. 16, lines 3-14) (i.e., a device cannot attempt to perform a port login unless the device obtain the unique hardware address (e.g., port's ID) of a target device from a directory. Therefore, the unique hardware address of the target device must be present in the directory.). This means each device will not attempt to perform a port login with a target device not presented in the directory because the device must obtain a hardware address from the directory in order to perform the port login. Blumenau (6,931,440) does not teach the unique hardware address as a target device that the respective host is authorized to access. Blumenau (6,839,747) teaches a centralized unique hardware address table (col. 5, lines 37-43; col. 8, lines 14-16), wherein the unique hardware address table stores the unique hardware address of every target device that each respective host is authorized to access (col. 9, lines 17-19, 45-62).

CONCLUSION

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX

MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip C Lee/

Primary Examiner, Art Unit 2452